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## THE MOON IN CHILDHOOD AND FOLKLORE.

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### I. INTRODUCTORY.

The safest way to gain a foothold for a study of this kind is to outline at the beginning its purpose and bearings. That its scientific value depends on very definite limitations is obvious to any one familiar, even in small degree, with the subject matter dealt with. The psychologist has heretofore necessarily limited himself to a study of the simplest kinds of mental activity, and excluded everything that seemed too complex for his methods. This led to the relative neglect of a group of processes which have lately been brought into much greater prominence by the genetic method, namely, the instincts and instinct-feelings. Whatever may be meant by these terms, and their connotation is as yet very indefinite, we may at least take them as meaning a series of definite functional relations to the organism's environment. No one, in the present state of inquiry, can seriously doubt that these elements, having behind them all the accumulated force of the evolutionary series, are the chief determining factors in individual and racial life. While the complex organization of human mental life precludes the possibility of tracing the instincts with the same degree of definiteness as in the animal series, yet they mark out with no less certainty the broader areas of human activities. The fact remains, however, that genetic psychology finds it necessary to take a long leap in passing from the animal to the human. The psychological "missing link" is not one but many. In order to supply these lacunæ in the line of development, a new branch of inquiry has been inaugurated and prosecuted with remarkable success, namely, the study of the child in all the stages of growth. But results here must suffer from the obvious limitation that the child's development is only a condensed index of what took place on the larger plane of race history. The steps are passed over too rapidly, and the necessary social environment is too deficient or too false to the child's nature, for the characteristic psychical states to take on definite form. Better conclusions are obtained if the results of this work are connected directly with the accessible data in the field of race-history. This latter group of facts is derived from two sources, the study of uncivilized races, and

the study of civilized races in their stages of formation. The second of these sources while less accessible is by far the more prolific in materials and interest. The reason it has been relatively disregarded is probably the unsettled state of the science of mythology.

Not many years since, and to some extent up to the present time, it was customary to regard a race's mythology as a curious collection of fantastic fables. Greek deities were studied because Greek sculptors had chosen them for their models, and their legends were investigated because they entered to so great an extent into classical drama and tragedy. Our eyes are just now being opened to the fact that each of these stories is a vast repository of psychological material, representing in crystallized form the accumulated experience of a long process of development. Psychological insight adds immense significance to the Greek and Teutonic epics. Very little is added to the Homeric story when Schliemann tells us that there was a fortified town on the Asiatic coast which the Greeks besieged and conquered. In this mixture of *Dichtung* and *Wahrheit*, the former only is worthy of study. It is in the figures of the heroes, the character of Achilles, the treatment of man by man, the games at the funeral of Patroklos, the actions of Helen and Clytemnestra, and above all the circle of divinities in the Olympic council, that scientific, as well as æsthetic interest must center. When we reflect, again, that our own religion and civilization are but further elaborations of myths and legends already outlined in the Vedas, the Homeric epics and the Norse mythology, we are in position to estimate the value of psychological investigation in this field.

While the linguistic school of comparative mythology can hardly expect the assent of the psychologist to all its claims, yet it has made one contribution which must be the starting point of all investigators, the fact that the chief mythological personages are ultimately representations of natural objects and natural phenomena. This connects on the one hand with the biological law of adaptation to the physical environment, and on the other, with the most primitive stages of reflection. We are justified to a certain extent in believing that these early accounts represent what nature actually meant to the most primitive human beings, and their instinctive reactions to it. It is interesting to compare the rigid physical nature of science with the animistic and highly personified environment to which early man actually adapted himself. Out of the feelings and actions which were thought to belong to the ever present and insistent facts of the physical world grew stories and romances which formed the groundwork of mythology. This point is universally admitted. The great similarity of the myth-form-

ing process in different parts of the world, and the fact that it is repeated in the life of every child, point to a psychological solidarity of the race which must have deep-lying roots in the evolutionary series. These early legends, as Max Müller says, "though they may be pronounced childish and tedious by some critics, seem to me to glitter with the brightest dew of nature's own poetry, and to contain those very touches that make us feel akin, not only with Homer or Shakespeare, but even with Lapps, and Finns, and Kaffirs."

With this universal animistic view of nature as a background, it seems natural that a great mythological and legendary accumulation should appear in connection with the moon. The following from Harley is an excellent statement of the case: "The sun, incomparable in splendor, invariable in aspect and motion, to the unaided eye immaculate in surface, too dazzling to permit prolonged observation, and shining in the daytime, when the mind was occupied with the duties of pastoral, agricultural or commercial life, was to the ancient simply an object of wonder as a glory, and of worship as a god. The moon, on the contrary, whose mildness of luster enticed attention, whose phases were an embodiment of change, whose strange spots seemed shadowy pictures of things and beings terrestrial, whose appearance amid the darkness of the night was so welcome, and who came to men susceptible, from the influences of quiet and gloom, of superstitious imaginings, from the very beginning grew into a familiar spirit of kindred form with their own, and though regarded as the subordinate and wife of the sun, was reverenced as the superior and husband of the earth. With the transmission of this myth began its transmutation. From the moon being a man it became a man's abode: with some it was the world whence human spirits came; with others it was the final home whither human spirits returned. Then it grew into a penal colony, to which egregious offenders were transported; or prison cage in which, behind bars of light, miserable sinners were to be exposed to all eternity, as a warning to the excellent of earth."

In the present study, ontogenetic and phylogenetic results are placed side by side, but the attempt is made to avoid the mistake of trying to find cases of exact correspondence. Whatever the doctrine of recapitulation may mean when applied to the later stages of growth, consideration must be shown for the immense difference between the two scales. It could hardly be supposed that the later and more plastic formations would appear with the definiteness of rudimentary organs, or that they would necessarily be fixed at all. The well known swimming movements, for example, or those of climbing, are really not rudimentary, as they have no residue, but are a stage in the

formation of more elaborate movements, to which they are subsumed. It is thought better, therefore, to illustrate a particular stage or tendency in both the ontogenetic and the phylogenetic series by assembling a large number of expressions on each side, and thus showing a general identity rather than in particulars. It may be argued that it is impossible to get the spontaneous expressions of children on account of the prevalence of nursery and folklore stories. This is true, but the argument hardly seems valid when we reflect that there must be a reason for the existence of all nursery stories, and that the interest which receives is identical with the interest which creates. A child's capacity is not a hole that can be filled with anything, but an active, selective interest. In some cases the external influence is, unfortunately, too great, as, for example, in the idea that the moon is composed of cheese. But on the whole, there can be no doubt that in the material presented there is a wide play of spontaneity.

The children's expressions are gathered from returns aggregating 423, of which 321 are from females, 102 from males. This material was collected by Dr. G. Stanley Hall. The Rev. Timothy Harley's *Moon Lore* made the task of collection much lighter on the side of folklore and mythology.

## 2. SUBSTANCE, DISTANCE, ETC.

Careful inquiry and reminiscence concerning the substance of the moon show that eighteen children, averaging five years, thought it made of cheese. Sometimes the mice eat it horse-shoe shaped, or that it could be fed by throwing cheese up so clouds could catch it; or it was green because the man in the moon fed on green grass; its spots were mould; it was really green but looked yellow, because wrapped in yellow cheese cloth; it was cheese mixed with wax or with melted lava, which might be edible; there were many rats, mice and skippers there; it grew big from a starry speck of light by eating cheese. It is made of rags, 3; or the man in it is stuffed with them; it is a picture with yellow paint, 4; made of yellow paper, 3; putty, 1; gold, 7; silver, 3; honey, 3; cotton, 3; a lucky stone, 1; a cake of ice, 5; of many stars, 3; air, 1; gas, 2; brass, 4; a plate, 3; a balloon, 3; clouds, 8; a ball, 2; tallow, 2; a lamp, candle or gas, 10; of light, 4; of dirt, 3; water, 3; cloth, 2; a bundle of sticks on fire, 1; milk, 1; butter, 2; felt, 1; lightning, 3; made of dead people who join hands in a circle of light, 1; some bright dish hung up, water and dirt like the earth, 1; a dead skull, 1; a water pail, 2; it is God, Christ, or any one else, 8; is the face or head of some dead relative or friend, 5; stuck out through the clouds, or the body goes straight toward the sky and is hidden from us by the head.

The majority under 8 did not know what it was made of, or else gave answers obviously invented *ad hoc*.

It is as big as a cent, my fist, a football, mamma's face, a jack-o'-lanthorn, a dinner plate, a flour barrel, a washbowl, a closet, a mill-wheel, a washtub, a hat, a well, a sewer hole, a house, etc. From forty-four such comparisons, I roughly average that its disk seems at least a foot in diameter.

Its distance from the spectator thought to be 12 feet, as far up as you could reach on a step-ladder, a ladder could be set up against it. In twenty-three cases, children want it given them. It could be reached by going to the horizon, climbing a hill or a tree. Six children ran away to get it as it was rising. Surprise is recorded on reaching a hill-top to find it just as far away. Eight wanted to go to the edge, touch or look close at it to see what it really was. When children are eight or ten, they realize that it would take days, weeks or months to walk to it, and a little later they begin to estimate its distance by absurdly extravagant figures or illustrations. Very common is the idea that there is somewhere a ladder, perhaps of strings, that leads to it.

How it got there and stays is one of the most baffling problems of childhood. It flew up, was blown up, swam up, crept, walked, rolled up, was fastened up in many ways by God or Christ, or some one climbed up to the sky, it glided up just as it now moves, it sailed up from the water, it was thrown up and hung or struck, went up in a power or balloon, was born, made or grew there. Younger children think papa or some adult put it there, or it went up by its own voluntary motion, and only older children think it got up by electricity. The age in which most opinions are expressed is nine, coinciding thus with the age of greatest interest in the puzzle as to how the man got in the moon.<sup>1</sup>

M., 4. Concluded it must be hooked on a board, and his playmates said it was mucilage and strings, because God would get tired holding it.

M., 7. Said the Tower of Babel and the pyramids was to put it up on.

F., 8. Thought it was slid up on the rainbow, and once thought the clouds held it.

M., 9. It was put up by the first men who were very tall and stood on each other's shoulders.

F., 10. Worried her mother with questioning how it could stay up there so long and not fall, as a kite or bird could not stay up.

F., 17. Used to wonder by the hour how it could possibly ever be put up so high, and thought out many mechanical devices.

F., 21. Never noticed much about the moon except sometimes it came around as you sometimes see a cloud or a bird. She never thought of its quarters or whether it moved.

<sup>1</sup> See Miriam V. Levy, *How the Man Got in the Moon*, 555 opinions, *Pedagogical Seminary*, Vol. III, p. 317.

M., 18. Used to sit and watch the moon to see if he could see it move, and concluded it must jerk along when he was not looking.

F., 23. Once had a panic on finding that the moon ran along just as fast as she did. It kept just opposite her, and she ran home without daring to look behind.

F., 21. Thought the moon was running a race to get home first.

F., 18. Once on a journey seeing the moon in a new direction, thought they had gone around the other side of it, but finally concluded that it was a different moon from that they had left at home.

M., 11. Said it went with us at night to keep off the dark. Twelve children, averaging eight years old, deny positively that it moves at all. It is always overhead and is fastened, or it may move around a little if it got loose, or it would hit the stars, clouds, houses or trees if it moved. Very many looked for feet or wings, said it rolled like a hoop, or slid, pushing everything before it.

M., 8. Sometimes it comes out of the woods, sometimes out of the river, and sometimes over the graveyard. Eleven children thought sometimes it came toward you, or sank back into the sky as they watched it.

### 3. CONNECTION WITH WEATHER.

The superstitions connecting the changes and appearance of the moon with the weather are so numerous and varied that it is impossible to recount them in detail. Moreover, it is unnecessary, as instances can readily present themselves to any one conversant with current folklore. The moon has been almost universally regarded as the principle of moisture, due partly to its connection with tides and partly to the moisture of night. The name Astarte, so important in oriental mythology, in addition to meaning the moon directly, contained also the idea of the watery element as opposed to the fire of the sun. The Mahometans, according to Millius, held the ancient idea of the moon that it was a star full of moisture, with which it filled the sublunar regions. In India the tradition is universal. In China the moon is the head of the Yin system of which water is a part. Says Grimm: "Water, an essential part of the Norse myth, is wanting in the story of the man with the thorn bush, but it reappears in the Carniolan story cited in Bretano's *Libussa*; the man in the moon is called *Kotar*, he makes her grow by pouring water." Among the early inhabitants of this continent, the universality of the belief is well known.

In the book on "Weather Lore," by Richard Inwards, there is a large collection of proverbs pertaining to the moon, of which we will quote a few of the most striking.

Circle near, water far;  
Circle far, water near.—*Italy*.

The moon with a circle brings water in her beak.

The moon, her face if red be,  
Of water speaks she.—*Zuni Indians*.

Pale moon doth rain,  
 Red moon doth blow,  
 White moon doth neither rain nor snow.—*Latin Proverb.*

A fog and a small moon  
 Bring an easterly wind soon.—*Cornwall.*

If the moon change on a Sunday, there will be a flood before the month is out.—*Worcestershire.*

Saturday's change and Sunday's full  
 Never brought good and never wull.—*Norfolk.*

If the full moon rise pale, expect rain.  
 Sharp horns do threaten windy weather.

It is sure to be a dry moon if it lies on its back, so that you can hang your hat on its horns.—*Welsh Border.*

If the moon show a silver shield,  
 Be not afraid to reap your field;  
 But if she rises haloed round,  
 Soon we 'll tread on deluged ground.

The full moon brings fine weather.

#### 4. THE MAN IN THE MOON.

There is reason to believe that a more universal animistic tendency preceded the anthropomorphism which lies at the foundation of most legends pertaining to the man in the moon. The stories familiar to us have deep-lying roots in Aryan mythology, which in the earliest accessible Greek and German forms, apart from vulgar variations, are highly wrought and extremely refined. With more primitive peoples the animistic concept takes the form of lower animals to almost as great extent as that of man. The hare has been a great favorite in all parts of the world, and especially among the common people of India. Says Max Müller: "As a curious coincidence it may be mentioned that in Sanskrit the moon is called *Sasānka*, *i. e.*, 'having the marks of a hare,' the black marks in the moon being taken for the likeness of the hare." The toad, mouse, cat, lion, bear, fox, have each been seen in the moon, and been the subject of folklore stories. That the reports from children refer to a human form only is probably due to the fact that the story of the man is told them at a very early age. Still this collection of expressions is one of the very best illustrations of the way animistic concepts must have grown up originally. Some of the expressions might stand, word for word, for some of the primitive legends.

Children pick out eyes, nose and mouth in the dark shades of the disk. It is a man's face, a woman's, a child's, angel's or God, etc. Nine children see in it the face of a dead parent or other relative. It is a whole figure of a man or woman leaning over and covering its face and crying, perhaps over the spilled milk

of Jack and Gill, or one is bent, laughing, over the prostrate form of the other.

F., 16. The man was inside and showed only his face. I puzzled a great deal how it could be a man when all poets call the moon feminine.

For F., 12, the moon's face had the map of Europe, Asia and Africa, and a human face.

For F., 7, he was just a man sitting before a big open fire-place warming himself.

For M., 10, it is a man because you can see his long sandy whiskers, if your eyes are good enough.

For M., 7, it is only a small child, and no one can tell whether it is a boy or a girl.

M., 9. It must be a man to be strong enough to give light so far.

F., 7. The moon is made out of a man and the sun out of a lady.

F., 7. We know it is a man because God put him there all alone always, for gathering sticks laughing.

For one, as a boy, it was always a muffled female form with the head heavily veiled, half sitting before some prostrate form, so that the impression was always rather sad. It is the same yet, and he can see no other form. An adult watched the moon for years to see the man's wife and came to dislike him, because he always left her at home.

F., 19. When about 12, I could clearly see a lady's face in the moon, the man was fainter. I thought they were on their honeymoon.

F., 10. The moon must be a man because it is bald-headed.

F., 19. It seemed to me something in front of a face which was behind looking through, and I thought her body was behind it extending straight out behind the face into the sky.

M., 9. He peeps his head out through the sky with his body behind it. Sometimes he looks at us and sometimes he goes to sleep so, with his head out of the clothes.

M., 6. Thinks it the face of Jesus looking out of heaven, seeing everything but looking so kind.

F., 11. The moon man sees and knows everything, but is alone and looks cold and sad. I would like to go up and take care of him.

M., 3, says it is George Washington; M., 4, thinks it Moses; M., 4, thinks it the funny man or Punch; three think he is Santa Claus; two think him a jolly leering kind of a drunkard; one says he is only a candy man; one, Jacob; two, a rabbit.

F., 9. It is a face I know. I love to play with him and I talk to him a great deal.

M., 4. Insists he smokes a pipe and keeps a cow that jumps over a rock.

F., 20. From five to eight or so, I talked and shouted a good deal by spells to the man in the moon, and thought he could hear although he did not answer.

F., 21. I longed to ask him if he was not tired, cold and lonesome, and sorry he gathered sticks on Sunday. I thought God ought to put others there to help him pick wood, and finally thought I saw them.

F., 12. I used to think there was a real man in the moon, and made wishes to him, but now I know it is only the picture of a man.

F., 35. My girl, age nine, has long wanted to tell the man in the moon something, but will not tell me what.

F., 16. I used to think that when the moon looked red, as in rising, the man was very angry; and when it looked far and pale, I thought him sick and wanted to offer him a glass of milk.

F., 20. Used to think he had headache because the clouds bumped his head.

F., 19. Never dared make a face at the moon lest she should be struck dead.

F., 18. I thought the man must love us because the moon shines so gently down on us.

F., 23. Could never understand why the man in the moon and his friends did not fall off, as their heads had to hang down so much.

F., 6. The moon has parties sometimes. He draws a big ring around and admits only a few stars, and perhaps puts on a veil so that we cannot see their feast.

F., 16. Heard it was good luck to courtesy to it and call it lady moon.

The cow, milk and butter as well as cheese are associated in many fantastic ways with the moon, and even the dog's dish and spoon, cat and fiddle, occasionally appear. The man looks like some neighbor, burns brush, gathers sticks, etc. For a few it is just a head cut off, and for others the moon is made for an invisible man, to play with. Many hear of a certain form or face there and peer and strain their eyes, trying to look under, back and around to trace out parts, as we do constellations, failing perhaps to find legs, eyes, finding this too round, that too flat, etc. The man with sticks is sometimes seen, and the spots are smoke from his pipe or a fire there.

Modern European stories of the man in the moon are probably rooted in the Scandinavian legend which still persists in the familiar story of Jack and Gill. Mâni, the moon once took up two children from the earth, Bil and Hjuki, as they were carrying the bucket Soeg and the pole Simul from the well of Byrgir. The resemblance to the common nursery rhyme is obvious. Mr. Baring-Gould says, "This verse, which to us seems at first sight nonsense, I have no hesitation in saying has a high antiquity, and refers to the Eddaic Hjuki and Bil. The names indicate as much. Hjuki, in Norse, would be pronounced Juki, which would readily become Jack; and Bil, for the sake of euphony and in order to give a female name to one of the children, would become Jill. The fall of Jack, and the subsequent fall of Jill, simply represent the vanishing of one moon spot after another, as the moon wanes. But the old Norse myth had a deeper signification than merely an explanation of the moon spots. Hjuki is derived from the verb *jakka*, to heap or pile together, to assemble and increase; and Bil, from *bila*, to break up or dissolve. Hjuki and Bil, therefore, signify nothing more than the waxing and waning of the moon, and the water they are represented as bearing signifies the fact that the rainfall depends on the phases of the moon. Waxing and waning were individualized, and the meteorologi-

cal fact of the connection of the rain with the moon was represented by the children as water-bearers. But though Jack and Jill became by degrees dissevered in the popular mind from the moon, the original myth went through a fresh phase, and exists still under a new form. . . . The girl soon dropped out of popular mythology, the boy oldened into a venerable man, he retained his pole, and the bucket was transformed into the thing he had stolen—sticks or vegetable." This view is supported by Grimm and other authorities.

##### 5. THE MOON AND MORALS.

F., 18. I thought the moon smiled at good girls, and frowned at us if we were bad. Often I could not feel sure which it did, and would ask mamma if I had been good or bad that day.

M., 20. Used to think if he was bad it would come close to earth and punish him.

F., 19. If good, it came near; if she was bad it went back into the sky.

F., 14. Used to think it shone bright if she was good, and was pale if she was bad.

F., 17. Was ashamed and afraid to have the moon see her misbehave or know of her bad acts.

Often children think the moon goes away, or has the clouds cover it, as a punishment for their sins or because it is saddened by them. On dark nights their conscience troubles them. It can see through clouds and houses, and may draw us up as a punishment to work with the stick gatherer. It sees naughty acts far more surely than good ones. It spies, watches and follows us wherever we go, even when we sleep. Bad children try to run away from it, but in vain. Young women, whose windows open only to the sky, draw the blinds so the moon will not see them undress, but one loves to expose herself to it. If children are bad, it looks straight at them. It may not be able to tell who we are, it is so far away; but it is made light so it can see us, and perhaps see our hearts and thoughts. It can look everywhere, and cannot only tell us what our friends at a distance are doing, but their thoughts and feelings. It may have special times to watch us and overlook us at others. It reports to God, Santa Claus, tells the stars. It is bolder than the sun, for it goes out nights.

Here the chief moral elements seem to be, first, an all-seeing eye, second, the hiding or absence of the moon for which they felt themselves responsible. The idea of moral example in the suggestion of being taken up to work with the stick-gatherer is not certain.

In the folklore stories, the moon is frequently regarded as the witness of wrong-doing, the sufferer for wrong-doing, or a warning to wrong-doers. The stories of the thief also furnish

definite cases of moral example. The following Icelandic legend from the collection of Jón Arnason, gives an instance of the moon avenging directly a case of robbery and effrontery. "There was once a sheep-stealer who sat down in a lonely place, with a leg of mutton in his hand, in order to feast upon it, for he had just stolen it. The moon shone bright and clear, not a single cloud being there in the heaven to hide her. While enjoying his gay feast, the impudent thief cut a piece off the meat, and, putting it on the point of his knife accosted the moon with these godless words:

' O moon, wilt thou  
On thy mouth now  
This dainty piece of mutton meat?'

Then a voice came from the heavens saying:

' Wouldst thou, thief, like  
Thy cheek to strike  
This fair key, scorching red with heat?'

At the same moment a red-hot key fell from the sky on to the cheek of the thief, burning on it a mark which he carried with him ever afterwards. Hence arose the custom in ancient times of branding or marking thieves." The moral quality of the following from the Chinese is unmistakable:

" *Ming Li of the House of Wei*  
" Reigned 227-237 A. D.

*On an Eclipse.—A Rescript.* We have heard that if a sovereign is remiss in government, Heaven terrifies him by calamities and strange portents. These are divine reprimands sent to recall him to a sense of duty. Thus partial eclipses of the sun and moon are manifest warnings that the rod of empire is not wielded aright. Ever since WE ascended the throne, OUR inability to continue the glorious traditions of our departed ancestors and carry on the great work of civilization, has now culminated in a warning message from on high. It therefore behooves US to issue commands for personal reformation, in order to avert the impending calamity.

" But the relations of Heaven with man are those of a father and son; and a father about to chastise his son would not be deterred were the latter to present him with a dish of meat. WE do not therefore consider it part of our duty to act in accordance with certain memorials advising that the prime minister and chief astronomer be instructed to offer up sacrifices on this occasion. Do ye, governors of districts and other high officers of State, seek rather to rectify your own hearts; and if any one can devise means to make up for OUR shortcomings, let him submit his proposals to the Throne."

The awful example of the man in the moon as Sabbath-breaker and thief is, of course, familiar in every nursery. The story has many versions, but the same idea. The one best known is supposed to have scriptural warrant, the passage which is its foundation being Num. XV, 32:36. We are told that the man found by Moses gathering sticks on the Sabbath was transferred to the moon. The passage cited merely states that the man was stoned by the congregation, and makes no mention of the moon. The story seems rather to be of Teutonic origin. The ordinary German story is that a man went out one Sunday ages ago into the wood to gather sticks. Having cut a fagot he slung it over his shoulder on a staff. On his way home he met a man in Sunday clothes walking toward church. "Do you know that this is Sunday on earth when all must rest from their labors?" he asked the wood cutter. "Sunday on earth, or Monday in heaven, its all one to me!" was the reply. "Then," said the stranger, "bear your bundle forever. And as you value not Sunday on earth, yours shall be a perpetual moon-day in heaven; you shall stand for eternity in the moon, a warning to all Sabbath-breakers." Whereupon the man with his staff and bundle was caught up into the moon, where he stands yet." (Proctor Myths and Marvels of Astronomy.)

Mr. Baring-Gould in his "Curious Myths of the Middle Ages," gives a slightly different version of the story, from Schaumberg-lippe, in which we are told that there is a woman with the man in the moon. The man is there because he strewed brambles in the church path on Sunday morning; the woman because she made butter on that day. A similar tale is told in Swabia and in Marken. He cites Frischart as saying that there "is to be seen in the moon a mannikin who stole wood." Among other German tribes it is told that he stole cabbages, or willow-boughs or sheep. With reference to the story in Great Britain, Harley cites Alexander Neckam, an abbot, born in 1157, who thus describes the popular belief: "Nonne novisti quid vulgus vocet rusticum in luna portantem spinas? Unde quidam vulgariter loquens ait,

Rusticus in luna  
Quem sarcina deprimit una  
Monstrat per spinas  
Nulli prodesse repinas."

The following lines from the "Testament and Complaint of Creseide," whose authorship is sometimes ascribed to Chaucer, are spoken of Lady Cynthia or the moon:

" Her gite was gray, and full of spottis blake,  
And on her brest a chorl painted ful even,  
Bering a bush of thornis on his backe  
Whiche for his theft might clime so ner the heaven."

According to Baring-Gould, the moon has always been associated with the idea of theft in the Norse mythology, and the figure seen in the moon came easily to be regarded as the thief. The Bible story of the stick-gatherer later supplanted the theft with Sabbath-breaking. How the idea of theft originally grew up in connection with the moon must, of course, remain largely conjecture, but the psychology of the process is not far to seek if we remember the statements of children at the beginning of the section. The idea that the moon knows what is taking place on earth is almost universal. This probably arises from the suggestion of an eye, and the moral effect is the same as in the ordinary statement, "God sees you." The majority of thefts are likely to have been committed at night, and the presence of the same spectator would establish a close line of association. This would also account for its being made an external conscience, because it would recall the former act and its associated moral quality.

#### 6. PLACE OF DEPARTED.

Wherever the idea of the moon as a *place* has appeared, it has almost invariably become connected with ideas of spirit inhabitation. It is sufficiently familiar to stimulate, and sufficiently remote from certainty to permit the freest play of fancy.

Children from eight to fourteen or so, develop ideas of what is in the moon. A few think they can see people move in it; some think dense forests; small people live in it, or odd, fairy, dwarf or other fantastic personages, as people without heads or all head. Its population increases or decreases. It may be full of beautiful angels. Often there is much music made by the people, or by the moon and stars. God lives or sleeps there. The people keep the lamp, like light-house keepers; or brighten it by letting the sun shine through it; or clean off the dirt that we can see from its contact with black clouds. Old and crooked people, or the souls of the dead, or of babies live there. All its inhabitants are pale and rather sober and sickly. When it goes the other way, they will straighten up. Its weather is hot or cold as ours is, and it is often smoky. Some think it a penal colony of Sabbath breakers, or can see them behind prison bars. A girl was terrified, because when looking at its shadow in water, it seemed to shake. Frequently the face of a dead parent or dead friend shows itself.

F., 16. Used to think it a big eye glaring at her, and later heard it was full of dead people.

Any one of these suggestions, given a receptive and responsive environment, might easily grow into a definite belief about another world or future life.

The folklore stories vary considerably as to detail but have the same central idea. Just as with children it is the place of the unusually strange or unusually beautiful. Lucian the Greek satirist wrote a book on the "Voyage to the Globe of the Moon," in which he describes it as a great round and shining island which hung in the air and yet was inhabited. These inhabitants were of a most fantastic order, were called Hippogipians, and their king was Endymion. Others of the ancients thought the lunar men and plants were of an immense size. Generally, however, the moon as a place stands in a much closer relation to the earth, and becomes a sort of hades or receptacle for the departed. In the Egyptian "Book of Respirations," Isis breathes the wish that the soul of her brother Osiris might rise to heaven in the disk of the moon. Plutarch tells us that the moon is the element of souls which resolve into her as the bodies of the dead resolve into the earth. Johanna Ambrosius, the German peasant-poet, prays in one of her poems that when she dies she may spend eternity in the moon. Mr. Tylor tells us that the Saliva Indians, of South America, point out the moon as their paradise where no mosquitoes are, and the Guaycurus show it as the home of deceased chiefs and medicine-men, and the Polynesians, of Tokelaù, in like manner claim it as the abode of departed kings and chiefs. A common mediæval conception made the moon the seat of hell, and Plutarch mentions an ancient theory that hell is in the air and elysium in the moon.

This brings us to a circle of the most beautiful conceptions in the whole range of mythology, the paradise stories of the different races, in each of which the moon has played a more or less important role. The two things necessary in the construction of a paradise seems to be trees and brightness. Some among the ancients said that the bright patches on the moon's face were plains, and the lunar spots forests, Diana's hunting-ground. Captain Cook says that many among the South Pacific Islanders regard the moon-spots as splendid groves of trees which once grew in Otaheite, but are now extinct. Others, according to Ellis, suppose the moon is a beautiful country in which grows the *aoa*, the most stately object in a Tahitian landscape. We have already referred to the Greek elysium, the plain far in the west, with its asphodel meadows and eternal sunset sky, the isles of the blessed sailing in a sea of blue and wrapped in burnished clouds, the blissful land where Odysseus and Laertes, Achilles and Hector meet, and all enmities are forgotten. The paradise of the Pacific Islander is essentially the type of all the others, the Hindoo Meru, the Persian Heden, the Chinese garden, the Hebrew paradise, and the Christian heaven.

## 7. EMOTIONAL REACTIONS.

Its presence makes small children, three to eight and older, feel "nice," "happy," "jolly," "splendid," "good," and rarely "sad." They jump, shout, run, laugh aloud, lose their usual sleepiness, are usually good tempered and often excited to the point of abandon. The excitement of the light may almost intoxicate. Sometimes, at this stage, it is said to be not beautiful but just pretty, because so round, bright and large. Only older children gaze and languish.

F., 9. The moon makes me think of love, because the man and woman in it make love and will marry sometime.

F., 11. The moon is sad, because she is the sun's wife, and he is proudest and they do not live together.

F., 16. I go out on the piazza or further, when the moon is there, for I feel it will take care of me.

F., 17. I used to think of the moon as very tall, blonde, a lady, proud and cold, and feared by all the stars. Now, at sight of her, I want to be silent and have the old feeling.

F., 15. I thought the moon saw us and changed its expression while looking at us. I remember, about ten, lying abed and making faces at it. The more terrible faces I made, the more the moon smiled. This made me angry.

F., 5. I love to make faces at the man in the moon. He laughs and comes down and kisses me.

F., 16. Once I was looking at the moon and I saw the man in it smile. I ran and told mamma the moon man was laughing at me. But I watched and found he was always smiling, so I knew he was pleasant.

Eight other children think they have seen the moon smile or laugh.

M., 29. The sight of the new moon always gives me a thrill of pleasure, and causes me to smile. The feeling is so intense that often I feel my hands clinching, my body growing tense, and I utter an involuntary ah. I wish I could account for it.

F., 26. Moonlight, especially if I am alone, makes me sad. Is it my unworthiness and littleness at sight of the wonders of the heavens? I long to be more deserving of their blessings and beauties.

F., 20. Loves to sit and watch the moon and make all sorts of fancies about it; how it is the oldest and biggest star, but all are growing to its size; how it is their mother, and sometimes gets angry with her children; how I would like to go up there and what I would do; about trees, houses, flowers and people there; how I would swish on a swing hitched to it, etc.

M., 5. I want to go right up and fly round heaven with it. I always say, "Ah, pretty, pretty moon."

M., 7. When I see it bright and pretty it makes me feel good and nice. I want to go right up there, and feel as if I must go at once.

F., 8. I love it very much, so much that I want to visit it, and often get a lump in my throat.

F., 21. It is soothing, sympathetic and tender, and its light is so soft and mild that it must love everybody and everything. It makes me good and rests me. Sixteen children want to go up to the moon. It draws, or they want to see what it is made of, they feel homesick or long for it.

F., 19. Feels awe and wants always to be still, quiet and alone awhile with every moon, and sometimes stretches out her arms to it.

F., 13. Loves it, because she heard how it loved a weary mouse, a pair of lovers, a convict, some lost children and a belated traveller.

M., 5. Misbehaved, was scolded, sulked and went out on the porch, and was overheard to say, "old moon you might cover your face, so she would not have seen me," and a few moments later, "I will make all the faces at you I want to and you can't hurt me."

M., 5. Ran suddenly out doors to hide, in a game, and found a bright moon, and shouted "get out of the way, there, you saucy old thing, or I will give you a slap."

M., 15. Used to go out and talk to the moon if in a bad humor, told all her secrets and told him not to tell.

F., 18. The moon looked to me like a funny, puffy, little man, with fat cheeks, laughing from ear to ear, with small twinkling eyes, and a broad forehead much wrinkled. I used to tell him or wanted to tell him all the funny jokes I heard, especially about him, and ask him what sort of a time he had.

F., 18. Used to want to hug and kiss the moon, and once asked it to marry her.

F., 19. Never could endure to look at or even think of the moon if away from home. It made her homesick and intolerably sad, it seemed so cold and friendless up there.

F., 21. Still wants to cry and go off by herself, sit still and watch it and think.

F., 19. It has a strange fascination for me. I cannot take my eyes off it.

F., 18. When I see it clear and bright, I feel good, partly because I think we will have good weather. I would like to take a walk with my beau if I had one.

F., 12. I always want to go out walking or riding, or see some one.

M., 27. I never can bear to go to bed when the moon is at its best. It seems like wasting opportunity to do something, or at least to say-ing it.

M., 29. To be honest, I always think of the girls when it is moon-light, and where I would like to go and what do with one or another of them.

F., 19. I used to cling to mamma, now I feel sad but enjoy it in spite of my tears. I do not know why my heart goes out to it so.

As regards emotional reactions among primitive peoples, a single quotation from Mr. Tylor will suffice. "Negro tribes seem almost universally to greet the new moon, whether in delight or disgust. The Guinea people fling themselves about with droll gestures, and pretend to throw firebrands at it; the Ashango men behold it with superstitious fear; the Fetu negroes jumped thrice into the air with hands together and gave thanks."

#### 8. EFFECT OF PHASES.

The monthly increase and decrease constitute, perhaps, the most obvious fact pertaining to the moon.

The quarters when noticed by children are variously explained. It is sometimes thought to be slowly made a part at a time, or the mice have eaten half; it is hammock shaped for the man in the moon to rock in, or to rock his baby in; there are several moons, wholes, halves, quarters, etc., it does only half duty or

loses part when the sun is out; it shows only part, or gets small when it is going to rain; or the part that is cut out goes to sleep and a part must be always on duty; new moons are just born or full ones are made out of worn out rims of old ones; it gets starved, thin and lean; it dies out and then comes to life again; the moon man draws the curtains part way or all the way when he goes to bed.

It eats, and you can see the teeth in its horseshoe mouth, or else its mouth is a mark on the full moon. Its chief food is cheese, but it also eats mice, stars, buckwheat cakes, cookies, and other round things so as to get round itself; or it eats pumpkins and lemons, because it is yellow or to get yellow; or catches birds; or eats pieces out of the sky; it eats off a big round and perhaps yellow table; and may eat bread, butter, oatmeal, candy, ice cream, drink milk out of a round cup. When it gets thin, it has done wrong and God withholds food. It may wear a mask and eat through that, drink up the rain or dew.

F., 29. Once thought things grew big and small, as the moon did.

The absence of the moon by day or by night is hard to explain, when noticed. Younger children think it is abed, undressed, asleep, etc., or that God had not hung it out. It relieves the sun as a night watchman, so it can go to bed, they arrange it between them so one shall be there. In storms or when we do not see it, it is shining in heaven on the other side of the sky or somewhere else, or the rain puts it out, or it retires to avoid darkness and storm. When it looks pale, it is just waking up, and has hardly got its eyes open. It may be behind the sun, while by night the sun is behind it. It gets very tired sometimes from the effort of shining, but more often from its journeys. It darkens the sky so it can sleep. One pictured the room it slept in, with a white bed, stove, lamp, etc. It shuts its eye so we cannot see it, and uses clouds for sheets and blankets. One could not conceive how it could know when to get up. It spends the night in the ground or in the water. When it does not shine, it is sick or the sun will not give it the light it begs for. God does not like to expose it to danger or dark and storm and shuts it up. Rain may wet it and give it cold.

Waxing and waning are reflected in nearly all the stories and are variously accounted for. In some it is the central fact to be explained. Two or three examples will suffice. Among the Khasias, of the Himalaya Mountains, it is told that the moon, who is a man, commits the unpardonable offense of falling in love with his mother-in-law every month. That commendable lady very properly reprobates him by throwing ashes in his face. There is a similar legend of Slavonic origin in which the

moon is unfaithful to his wife, the sun, loving the morning-star instead, and for punishment is cut with a sword. Among the Greenlanders, the sun and moon were once human beings, sister and brother, named Malina and Anninga. The latter while playing in the dark, seized his sister by the shoulders, a sign of courtship. In order to recognize him, she smeared soot on his face which accounts for the spots. When she discovered who it was, she fled to the sky, becoming the sun, closely followed by Anninga, who became the moon. The chase at times makes him very hungry and thin, when he gives it up for a few days to hunt seals. This fattens him, and he becomes the full moon again. Among the natives of Encounter Bay it is told that the moon is a woman living a dissipated life among men, which causes her to grow very thin, whereupon she retires for awhile, or rather is driven away, to recover her plumpness, when she resumes her gay life. A well known savage myth is that in which the moon tells men through a beast that though they die, like her they shall live again.

The effect of the moon's phases on common folklore is almost inconceivable in extent. It stands always as the symbol of fickleness, especially of increase and decrease, growth and decay. It is only a short transition in association from the symbol to the cause, so the moon has exclusive control of all undertakings in which these factors enter in. Says Harley: "The *new moon* is considered pre-eminently auspicious for commencements,—for all kinds of building up, and beginning *de novo*. Houses are to be erected and moved into; marriages are to be concluded, money counted, hair and nails cut, healing herbs and pure dew gathered, all at the new moon. Money counted at that period will be increased. The *full moon* is the time for pulling down, and thinking of the end of all things. Cut your timber, mow your grass, make your hay, not while the sun shines, but while the moon wanes; also stuff your feather bed then, and so kill the newly plucked feathers completely, and bring them to rest. Wash your linen, too, by the waning moon, that the dirt may disappear with the dwindling light." From the Greeks down the new moon has been considered the proper time for marriages and births. Among the Druids, according to Forbes Leslie, "the moon, in the increase, at the full, and on her wane, are emblems of prosperity, established success, or declining fortune, by which many persons did, and some still do, regulate the period for commencing their most important undertakings." In Gealic the word for fortune is derived from that which means the full moon. Numerous superstitions exist as to the way the new moon must be first seen, with various incantations, and methods of prognosticating the future.

While dealing with the general question of the moon's influence upon human fortune, it may be well to refer to the wide-spread astrological superstitions pertaining to its effect upon the body. The chief organ that it governed was, of course, the brain, but it had a secondary control of several others. The words "lunacy" and "mania" are of direct derivation, and even now we speak of a person as being "moon struck." That all forms of insanity are traceable to this influence, is a very ancient belief. An interesting example of the ancient practice of medicine is given by La Martinière, quoted by Harley. "This lunar planet," says this author, "is damp of itself, but, by the radiation of the sun, is of various temperaments, as follows: in its first quadrant it is warm and damp, at which time it is good to let the blood of sanguine persons; in its second it is warm and dry, at which time it is good to bleed the choleric; in its third quadrant it is cold and moist, and phlegmatic people may be bled; and in its fourth it is cold and dry, at which time it is good to bleed the melancholic." The light of the moon seems to have been almost universally considered detrimental to health, and nearly all the maladies in the catalogue were within its power to inflict.

#### 9. MOON-WORSHIP.

To determine the necessary processes and fundamental stages in the development of a religion is the paramount problem in the new science of religions. Without involving questions as yet unsettled by investigators in this field, we may refer to certain generally conceded facts. One of these is that every religion is a *growth* involving a great complexity of elements. Again, it stands as the final output, so to speak, of a people's life, and is the ultimate organizing element in any particular period. After a more or less diffused growth, each of the great ethnic religions seems to have been summed up, recast, and individualized by a great personality. While it is possible to follow back the line of development and find elements that had been assimilated to a larger system, it is also, to some extent, possible to approach these elements from the side of their psychological beginnings. Thus the sex-instinct which even now stands so near to the religious sentiment, shows its enormous significance historically in the forms of phallicism so prevalent in some periods. It is, of course, one of the problems of psychology to determine what in the individual is the raw material of which religion is later made. The existence of an original religious instinct is altogether without evidence. As with races, so with individuals, it is a growth not only through childhood, but through the entire life. That children at an early age pray to the moon, is evident from many of the re-

ports, but just what a prayer means at this age is doubtful. Several thought the figure in the moon was God, or Christ, or angels. It is probable that the elementary feelings are a sense of familiarity, sympathy, responsiveness, and a desire for help. The following examples are illustrations of what is meant.

F., 18. I took great pleasure, aged twelve to fourteen, sitting by my window and telling the moon all my school girl troubles, and asking different things. He would smile and encourage me.

F., 11. I always want to talk to the moon, and sometimes do. I always say "shine on." F., 18, used to say, how do you do, aloud to the moon. F., 9, says, where are you going, aloud. M., 5, was heard to ask the moon its name. F., 7, used to say "I want you." F., 15, used to tell the moon all her troubles. F., 22, used to "tell and ask many things." F., 9, asked many questions and talked all about toys and dolls (she was an only and neglected child). When F., 19, first learned things, she used, as a child, teach them to the moon. F., 5, would sing and talk to the moon, and ask it to give her cake and ice cream, and beg it to come and play with her. Children pray the moon to shine, so they can see to go somewhere, or so they will not be afraid. "Take me with you" is another frequent invocation. To look over the right shoulder and wish for things is very common. F., 19. At six and eight, my sister and I were left alone till into the evening by our parents being delayed. We asked the moon where they were, and I shall never forget the strong impression of anxiety with which we watched to see if he would tell us.

It is an easy transition from the simple accounts of natural phenomena embodied in myths to the organization of these into more or less complex systems. Among these primitive formations one would expect to find unusual importance attached to myths of the sun and moon, the rulers of day and night, the most continuously present facts of man's natural environment. That this was the case among many peoples cannot be doubted. The ruins of many ancient temples abundantly attest the great antiquity of this form of worship. Some authorities maintain that lunolatry preceded the worship of the sun. Says Mr. Tylor, "Moon worship, naturally ranking below sun worship in importance, ranges through nearly the same district of culture. There are remarkable cases in which the moon is recognized as a great deity by tribes who take less account, or none at all, of the sun."

Among the ancient Egyptians the sun and moon worship seems to have been the earliest form of religion. There were two moon-gods, Khonsu and Thoth. All representations of these deities show them with the crescent, and Thoth was the keeper of time. The cat, well known as one of the sacred animals among the Egyptians, was dedicated to the moon. The sun and moon appear very frequently on ancient Assyrian monuments as sacred symbols. The Chaldeans were undoubtedly moon-worshippers, the names of the deity being Sin and Hur. The latter was also the name of the Chaldean capital.

The name for the moon in Syriac at the present time is Sin. Many think it appears in Sinai, and that this mountain was consecrated to the moon. The fact is very important in view of the part Sinai played in the Hebrew religion. But there is more positive evidence of the existence of lunolatry among the Hebrews. There is frequent reference in the Scriptures to the "host of heaven," to the "queen of heaven," to Astarte or Ashtaroth, the moon-goddess of the Phœnicians. Ancient writers, as Lucian and Herodian, identified the latter deity with the moon. There is reference in Genesis to Ashtaroth-Karnaim, meaning Ashtaroth of two horns. The symbol of Astarte was the heifer with the crescent horns, the worship of which continued almost throughout Hebrew history. The crescent was one of the most common of ornaments.

The personification of the moon among the Greeks crystallized in two well-defined myths, those of Selēnē and Artemis, each characterized by that delicate and refined symbolism which gives its greatest charm to Greek mythology. Says Cox of the Selēnē myth, "As Endymion sinks into his dreamless sleep beneath the Latmian hill, the beautiful Selēnē comes to gaze upon the being whom she loves only to lose. The phrase was too transparent to allow of the growth of a highly developed myth. In the one name we have the sun sinking down into the unseen land where all things are forgotten—in the other the full moon comes forth from the east to greet the sun, before he dies in the western sky. Hence there is little told of Selēnē which fails to carry with it an obvious meaning. She is the beautiful eye of night, the daughter of Hyperion, of Pallas or of Helios, the sister of Phoibos Apollon. Like the sun, she moves across the heaven in a chariot drawn by white horses from which her soft light streams down to earth, or she is the huntress, roving like Alpheios, over hill and dale. She is the bride of Zeus, and the mother of Pandia, the full orb which gleams in the nightly sky; or as loving, like him, the crags, the streams and the hills, she is beloved by Pan, who entices her into the dark woods under the guise of a snow-white ram. In other words, the soft whispering wind, driving before it the shining fleecy clouds, draws the moon onwards into the sombre groves."

The same writer says concerning Artemis: "In some traditions Artemis is the twin sister of Phoibos, with whom she takes her place in the ranks of correlative deities. In others she is born so long before him that she can aid Lētō her mother at the birth of Phoibos—a myth which speaks of the dawn and the sun as alike sprung from the night. Thus her birthplace is either Delos or Ortygia, in either case the bright morning land, and her purity is that of Athēnē and Hestia. . . . .

Like Phoibos, she has the power of life and death; she can lessen or take away the miseries and plagues which she brings upon men, and those who honor her are rich in flocks and herds and reach a happy old age. From those who neglect her, she exacts a fearful penalty. . . . In a word the colors may be paler, but her features and form generally are those of her glorious brother. With him she takes delight in song, and as Phoibos overcomes the Python, so she is the slayer of Tityos."

According to Pansanias, there was a worship among the Greeks of the Egyptian goddess Isis, which, if we can trust Diodorus, meant the moon with them. That moon worship persisted to a very late period is shown by the words of Socrates, who said at his trial, "You strange man, Meléetus, are you seriously affirming that I do not think Helios and Selene to be gods, as the rest of mankind think?"

The chief moon-deity among the Romans was Luna, sister of the sun. Both Pliny and Tacitus speak of temples consecrated to her worship. Another moon-goddess was Diana, corresponding to the Greek Artemis. Grimm, the best authority on the ancient Germans, tells us, "That to our remote ancestry the heavenly bodies, especially the sun and moon, were divine beings, will not admit of any doubt." Moon-worship appears among the rites of the Druids in Britain and Ireland. Its prevalence in China and among the American tribes is well known. There can be little doubt that vestiges of lunolatry appear in the Christian religion. A definite order was formed about the fourth century. The lower classes in the middle ages openly worshipped the moon, identifying her with the Virgin. In the Missal Mary is spoken of as, "Sancta Maria, coeli Regina, et mundi Domina." These illustrations will be sufficient to show how important the moon has been in the development of the religious consciousness.

#### 10. THE MOON OF SCIENCE.

This fragmentary outline may, perhaps, be sufficient to show that the moon has been the subject of one of the most profound chapters of human experience. As a central object in that environment of which it has been and is the business of man to make account, it has been a continual stimulus helping to call out and fix some of the most elementary affirmations of the mind. That these same affirmations not only appeal to, but arise spontaneously out of the growing instincts of the child is almost beyond doubt. It becomes then a matter of considerable interest and importance to note the stage of transition from the primary animistic and mythical conception to that made necessary by positive science. The moon furnishes the best

example in nature of a complete reversal of views. The transition is not so marked in the case of the sun which, on account of its manifold influences, stands as the type of perennial activity, or the stars and planets which with their great remoteness or possible inhabitation remain to some extent in the region of mystery and conjecture. But the facts concerning the moon, which science has assembled, deprives it of every vestige of anthropomorphic interest. We will recount a few of them.

The moon is our nearest neighbor, astronomically, its mean distance being 238,840 miles. Its diameter is 2,163 miles; surface  $\frac{1}{8}$ , and volume  $\frac{1}{49}$  that of the earth; rotates on its axis once a month, in precisely the same time as required for revolution around the earth; phases due to fact that we can observe only that part of the illuminated hemisphere turned toward the earth at the time; light reflected, only  $\frac{1}{5}$  as strong as earth-shine; atmosphere extremely rare,  $\frac{1}{750}$  of pressure at earth's surface, probably absorbed in cooling; no water, also absorbed; temperature at end of lunar day about freezing point of water, at end of lunar night, 200° below zero; no signs of life. The surface is very broken; covered with great volcanic craters, some of which are more than 100 miles across; twelve great plains, called seas by Galileo; many deep valleys and cracks; some mountains reaching the height of 23,000 feet.

It stands as the great example of a worn-out world, and the type of what our own planet will ultimately become. The passage from the conception that treats the moon as a living personality with multiform influences upon human weal and woe to that in which it appears as only a dead stone, must necessarily be attended by much that is pathetic, because it marks the disintegration of one attitude toward nature and the inception of another. Every *eclaircissement* is a period of criticism and disruption. The historical counterpart of what appears in the life of every individual is to be found in the Greece of the Sophists and Socrates. The very statement that man is the measure of all things implies the realization that he has already lost his standard. The balance struck by Plato between the old mythology and the new critical attitude is perhaps the reason of his significance as the philosopher who most truly reflects the meaning of life. For us his work is important as showing the impossibility of destroying an attitude based in the evolutionary series and standing as the ultimate outcome of a whole people's existence. The same reversion can be noted in every other period of "enlightenment." Along with it always goes a marked treachery to the principle it is trying to establish. The most convenient lesson probably which modern man has learned, is that of dividing his experience into sep-

arate compartments connected by blindfold passages. In one he keeps his rationalism, in the other the more neglected and, in some respects, the more important parts of his experience. A good example of what is meant is the enlightenment of the eighteenth century. A thoroughgoing mechanical scheme was good enough for the visible universe, but beyond it was that quintessence of the mythological heritage, a *deus ex machina*. That this is still the position of many, needs no more than to be indicated. It is more than suggestive that the chief impulse in the development of biology came from the impossibility of longer accepting the creationistic mythology. The science of life undoubtedly appeals to something more fundamental in human nature than the mere desire to know. This development from mechanism to organism suggests the true direction the animistic instinct should take—that is, it should become a motive within science itself. The lesson of history is but partially learned if we fail to perceive that an *eclaircissement*, whether in individual or racial life, is nothing more than a momentary disruption preliminary to a new adjustment, and a disruption that might in most cases be avoided. After all, the raw material of knowledge, even scientific, is not externally gathered, but to be found within man himself, made by a process of development into established forms. An excellent illustration of what it meant is the subject we have attempted to treat. The moon, considered solely with reference to itself, has been before the human mind from the beginning just as it is now. It has been, so to speak, a fixed point about which human nature has made its revolutions. It would seem, to be sure, that science has brought all such movements to a complete stop, but the moon-lover need not be pessimistic. He should remember that the romantic attitude toward nature came directly from the heart of the mechanicalistic movement, and, while Schelling could no longer be accepted, the last century showed the most genuine feeling for nature known since the Greeks. If the animistic instinct cannot surmount a wall, it is likely to find a way around it. Even now, it means no more to the person of deep æsthetic feeling to say that the moon is a barren body of matter than that a landscape is composed of inanimate objects, or a symphony of vibrations, or a painting of canvas and pigment. Again, the meaning of matter is by no means clear as yet; its supposed deadness may be merely accidental. If one wished to press the question, he might insist with some justification that the characteristic concepts of science are ultimately mythological agencies. Certainly some of them are not distant many removes. Our sole object here, and indeed the whole value of the study, if it has any, is to show the complete relativity of an object in nature

when viewed from the standpoint of psychological development, and the mobility of the supposedly fixed environment in the actual experience of it, to which it must be referred if it is to have meaning as environment.

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